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EXAMINER

ART UNIT	PAPER
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See enclosed Supplemental Examiner's Answer. The Hun reference is included as prior art in paragraph 8 of the Answer, in response to the Order entered by the Board of Appeals.



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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Paper No. 18

Application Number: 09/734,601

Filing Date: December 13, 2000

Appellant(s): William Possidento

John P. Halvonik

For Appellant

Art Unit: 3712

EXAMINER'S ANSWER

This is in response to the appeal brief filed on July 28, 2003.

(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments After Final*

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Grouping of Claims*

Appellant's brief includes a statement that claims 5 and 6 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8). It appears that claims 6-8 stand or fall

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together, as no specific arguments with respect to claims 7 or 8 have been raised and the claims depend from claim 6.

(8) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) *Prior Art of Record*

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

3,594,923	MIDGLEY	7-1971
85,299	GAINES	12-1868
1,498,951 (Great Britain)	HUN	1-1978

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claims 5-8 are rejected under 35 U.S.C. 103. This rejection is set forth in prior Office Action, Paper No. 11. Claims 5-7 are rejected under Midgley in view of Gaines. Claim 8 is rejected under Midgley in view of Gaines, and further in view of Hun.

(11) *Response to Argument*

Appellant's first argument (Section A) is that Gaines does not suggest the modification of Midgley to provide elements in the shape of cubes. Appellant relies on the fact that Gaines was published in 1868, when the periodic chart did not exist, as evidence that Gaines does not suggest the proposed modification. However, the test for obviousness is not whether it would have been obvious to one of

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ordinary skill at the time of publication of the secondary reference to combine the teachings of references. Rather, the test is whether it would have been obvious to one of ordinary skill on the date of filing the application, in this case, December 13, 2000, to create the claimed invention using known teachings. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). Of course, the periodic table was well known to those of ordinary skill in the art on December 13, 2000, and in any event is disclosed by Midgley. Obviousness does not dictate that the claimed invention be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Both Midgley and Gaines are directed to systems for teaching chemistry. Gaines discusses on page 1, lines 10-15 various advantages to its system of cubic shapes for representing elements; namely, that it provides a simple and easy method of illustrating the rudiments of chemistry, which secures the attention of the user. Also, it is very well known in teaching systems to provide three dimensional shapes representing various concepts, to provide elements which are easily handled, and illustrate the concepts being taught. It is submitted that the combined teachings of Midgley, Gaines, and the knowledge generally available to one of ordinary skill in the art at the time appellant's application was filed would have suggested the claimed invention.

With respect to the arguments that Gaines fails to disclose various features of the invention, including the uniform size of the elements and each element being represented by one cube, each of these concepts is taught by Midgley. Midgley discloses replaceable pieces which are the same size, each chemical element being represented by only one piece for the purpose of facilitating arrangement of the shapes into a periodic chart. Appellant makes further arguments on page 7 of the Brief that there is no

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motivation to modify the device of Gaines by providing a periodic chart, and that such modification would destroy the purpose of the Gaines device, and that "reading Gaines in light of Midgley" would not suggest the claimed invention. However, Gaines is not being read in light of Midgley. Midgley, as the primary reference cited in the rejections, is being read in light of Midgley. Appellant correctly notes at the bottom of page 7 that Gaines teaches that it is possible to make cubic shapes to represent the chemical elements. The cubic shape is the only limitation of claim 5 which is not disclosed by Midgley. Gaines is being cited for this teaching of cubic shapes representing the elements. The rejection of claim 5 is proper.

With respect to the argument that there is no suggestion to modify the compartments of Gaines into a periodic chart (Section B); again, Gaines is not being read in light of Midgley. The rejections of the claims do not involve any modification whatsoever of the Gaines device. The teachings of Midgley, as the primary reference cited in the rejections, are being modified in light of Gaines.

With respect to the argument that there is no suggestion to modify the teachings of Midgley by providing the cubes of Gaines (Section C), given the differences in sizes of the cubes of Gaines; again, Gaines is not cited for the relative size of its pieces. Midgley already discloses pieces which are all identically shaped, the allow the pieces to be assembled as a periodic chart. Applicant also appears to argue that Midgley itself does not disclose a "puzzle board". It is not at all clear what elements are encompassed by a "puzzle board" which are not taught by Midgley, as Midgley discloses a board having recesses which are sized to accommodate the pieces representing the elements.

With respect to the argument that there is no suggestion to provide a periodic chart having the specific shape of claim 6 (Section D); again, the test for obviousness is not what would have been

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suggested to one of ordinary skill in the art in 1868. Gaines is not the primary reference of the rejections, and is not being modified. The shape of the periodic chart was well known at the time of filing the present application. Midgley discloses in Figure 6 that its device comprises a periodic chart having a 3x18 array at the bottom, and a 2x2 and a 2x6 array at the top. The invention of claim 6 would have been obvious in light of the combined teachings of the prior art.

Section E of Appellant's arguments appears to be a restatement of arguments previously made; namely, that Gaines discloses cubes having different shapes, and more than one cube for representing a particular element; thus rendering the combination improper. Because Midgley already discloses the features of each element being represented by one piece, and each element being identically shaped to allow the user to arrange the shapes in a periodic chart, the combination of references is proper.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Kurt Fernstrom



KF

September 25, 2003

Conferees

Jacob Ackun and Derris Banks

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